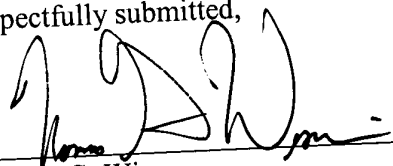


REMARKS

It is respectfully submitted that the present claims are in condition for examination on the merits. However, if any questions remain, the Examiner or other PTO official is encouraged to call the undersigned at (202) 513-4614 expedite this application.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 22-0261. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,



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APPENDIX

Amended claims only (with markings to show changes)

1. Surface-modified, pyrogenically produced oxides doped by aerosol.
2. (Amended) Surface-modified, pyrogenically produced oxides doped by aerosol, characterized in that the oxides are [oxides] selected from the group consisting of SiO_2 , Al_2O_3 , TiO_2 , B_2O_3 , ZrO_2 , In_2O_3 , ZnO , Fe_2O_3 , Nb_2O_5 , V_2O_5 , WO_3 , SnO_2 [,] and GeO_2 .
3. (Amended) The surface [Surface]-modified, pyrogenically produced oxides [doped by aerosol in accordance with] according to claim 1 or 2, [characterized in that they are] wherein the surface-is modified with one or several compounds selected from the following groups:
 - a) Organosilanes of the type $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$ and $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n-1})$,
 $\text{R} = \text{alkyl}_1$
 $n = 1 - 20$;
 - b) Organosilanes of the type $\text{R}'_x(\text{RO})_y\text{Si}(\text{C}_n\text{H}_{2n+1})$ and $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$
 $\text{R} = \text{alkyl}_1$
 $\text{R}' = \text{alkyl}_1$
 $\text{R}' = \text{cycloalkyl}$
 $N = 1 - 20$,

$$x+y=3_i$$

$$x=1, 2_i$$

$$y=1, 2_i$$

c) Halogen organosilanes of the type $X_3 \text{ Si}(\text{C}_n\text{H}_{2n+1})$ and $X_3 \text{ Si}(\text{C}_n\text{H}_{2n-1})$

$$X = \text{Cl}, \text{Br}_i$$

$$n = 1 - 20_i$$

d) Halogen organosilanes of the type $X_2 (\text{R}') \text{ Si}(\text{C}_n\text{H}_{2n+1})$ and

$$X_2 (\text{R}') \text{ Si}(\text{C}_n\text{H}_{2n-1})_i$$

$$X = \text{Cl}, \text{Br}$$

$$\text{R}' = \text{alkyl}$$

$$\text{R}' = \text{cycloalkyl}$$

$$n = 1 - 20_i$$

e) Halogen organosilanes of the type $X (\text{R}')_2 \text{ Si}(\text{C}_n\text{H}_{2n+1})$ and

$$X (\text{R}')_2 \text{ Si}(\text{C}_n\text{H}_{2n-1})_i$$

$$X = \text{Cl}, \text{Br}_i$$

$$\text{R}' = \text{alkyl}$$

$$\text{R}' = \text{cycloalkyl}$$

$$n = 1 - 20_i$$

f) Organosilanes of the type $(RO)_3Si(CH_2)_m-R'$

$R = \text{alkyl}$

$m = 0.1 - 20$

$R' = \text{methyl-, aryl (e.g., } -C_6H_5, \text{ substituted phenyl groups)}$

$-C_4F_9, OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2$

$-NH_2, =N_3, -SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$

$-N-(CH_2-CH_2-CH_2NH_2)_2$

$-OOC(CH_3)_c = CH_2$

$-OCH_2-CH(O)CH_2$

$-NH-CO-N-CO-(CH_2)_5$

$-NH-COO-CH_3, -NH-COO-CH_2-CH_3, -NH-(CH_2)_3Si(or)_3$

$-S_x-(CH_2)_3Si(OR)_3$

$-SH$, and

$-NR'R''R'''$, wherein $[R' = \text{alkyl, aryl; } R'' = H, \text{ alkyl, aryl; and } R''' = H, \text{ alkyl, aryl,}$

benzyl, or $C_2H_4NR''''R'''''$ with $R'''' = [A] H$, alkyl and

$R'''''' = H, \text{ alkyl;}$

g) Organosilanes of the type $(R'')_x(RO)_ySi(CH_2)_m-R'$

$R'' = \text{alkyl, cycloalkyl,}$

$x+y = 2$

$x = 1, 2$

$y = 1, 2$

$m = 0.1$ to 20_1

$R' = \text{methyl-}, \text{aryl} [(e.g.), -C_6H_5, \text{substituted phenyl groups}[]]$

$-C_4F_9, -OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$

$-NH_2, -N_3, SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$

$-N-(CH_2-CH_2-NH_2)_2,$

$-OOC(CH_3)C=CH_2,$

$-OCH_2-CH(O)CH_2,$

$-NH-CO-N-CO-(CH_2)_5$

$-NH-COO-CH_3, -NH-COO-CH_2-CH_3, -NH-(CH_2)_3Si(OR)_3,$

$-S_x-(CH_2)_3Si(OR)_3$

$-SH$, and

$-NR'R''R'''$, wherein $[(R' = \text{alkyl, aryl}; R'' = H,$

$\text{alkyl, aryl}; \text{and } R''' = H, \text{alkyl, aryl, benzyl, or}$

$C_2H_4NR''''R'''''$ with $R'''' = [A] H, \text{alkyl and}$

$R'''' = H, \text{alkyl})_1$

h) Halogen organosilanes of the type $X_3Si(CH_2)_mR'$

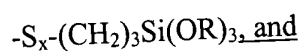
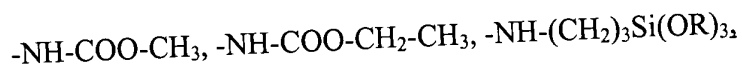
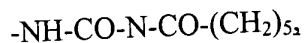
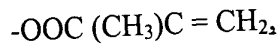
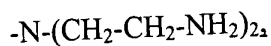
$X = Cl, Br,$

$m = 0, 1 - 20_1$

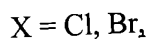
$R' = \text{methyl-}, \text{aryl} [(e.g.), -C_6H_5, \text{substituted phenyl groups}[]]$

$-C_4F_9, -OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$

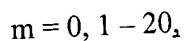
$-NH_2, -N_3, SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$



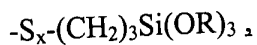
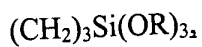
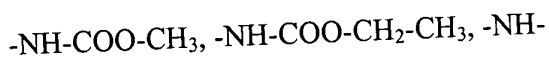
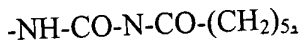
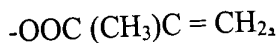
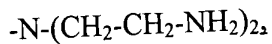
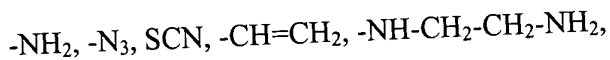
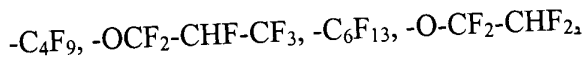
i) Halogen organosilanes of the type $(R)X_2Si(CH_2)_m-R'$



R = alkyl such as methyl, - ethyl-, propyl-,



R' = methyl-, aryl [(e.g.), $-C_6H_5$, substituted phenyl groups[]],



-SH₂

(j) Halogen organosilanes of the type $(R)_2X Si(CH_2)_m-R'$

X = Cl, Br₂

R = alkyl₁

m = 0, 1 - 20₁

R' = methyl-, aryl [(e.g.), -C₆H₅, substituted phenyl groups[]],

-C₄F₉, -OCF₂-CHF-CF₃, -C₆F₁₃, -O-CF₂-CHF₂,
 -NH₂, -N₃, SCN, -CH=CH₂, -NH-CH₂-CH₂-NH₂,

-N-(CH₂-CH₂-NH₂)₂,
 -OOC (CH₃)C = CH₂,
 -OCH₂-CH(O) CH₂,
 -NH-CO-N-CO-(CH₂)₅,
 -NH-COO-CH₃, -NH-COO-CH₂-CH₃, -NH-(CH₂)₃Si(OR)₃,
 -S_x-(CH₂)₃Si(OR)₃
 -SH₂

(k) Silazanes of the type $R'_2Si-N-SiR_2R'$

|

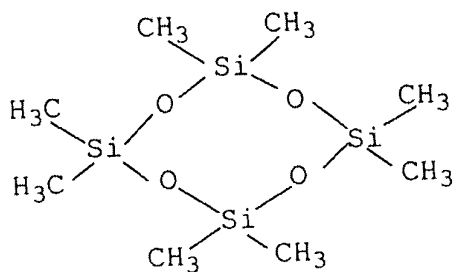
H

R = alkyl₁

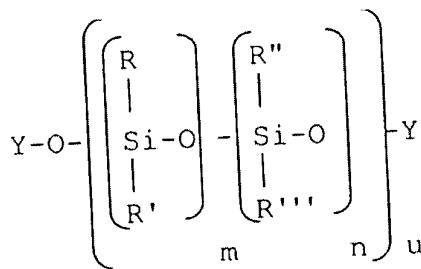
R' = alkyl, vinyl; or

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(l) Cyclic polysiloxanes of the type D 3, D 4[,]or D 5[, e.g. octamethylcyclotetrasiloxane = D4]:



m) Polysiloxanes or silicone oils of the type



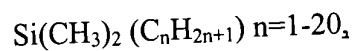
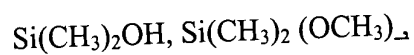
$$m = 0, 1, 2, 3, \dots \infty$$

$$n = 0, 1, 2, 3, \dots \infty$$

$$u = 0, 1, 2, 3, \dots \infty$$

$$Y=CH_3, H, C_nH_{2n+1} \quad n=1-20$$

$$Y=Si(CH_3)_3, Si(CH_3)_2H$$



R = alkyl, aryl, $(CH_2)_n-NH_2$, H ,

R' = alkyl, aryl, (CH₂)_n-NH₂, H₂

R'' = alkyl, aryl, (CH₂)_n-NH₂, H₂

R''' = alkyl, aryl, (CH₂)_n-NH₂, H₂

4. (Amended) A method of producing the surface-modified oxides in accordance with claim 1 or 2, [characterized in that] comprising placing pyrogenically produced oxides doped by aerosol [are placed] in a suitable mixing container, spraying the oxides [are sprayed] under intensive mixing[, optionally with water and/or acid at first and subsequently] with [a] the surface-modification reagent or a mixture of several surface-modification reagents[, optionally re-mixed 15 to 30 minutes and tempered at a temperature of 100 to 400 °C for a period of 1 to 6 hours].

5.(Amended) [The use of] In a reinforcing filler composition wherein the improvement comprises the surface-modified oxides according to claim 1 or 2 as reinforcing filler.

6. (New) The method of claim 4 wherein the spraying step includes spraying with water and/or acid prior to the spraying with the surface-modification reagent or a mixture of several surface-modification reagents.

7. (New) The method of claim 4 further comprising re-mixing at 15 to 30 minutes and tempering at a temperature of 100 to 400 °C for a period of 1 to 6 hours.

8. (New) The surface-modified, pyrogenically produced oxides according to claim 3 wherein the cyclic polysiloxanes is type D 4.

9. (New) The surface-modified, pyrogenically produced oxides according to claim 8 wherein the type D4 cyclic polysiloxanes is octamethylcyclotetrasiloxane.

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